



Rebuilding Rwanda

FROM GENOCIDE TO PROSPERITY
THROUGH EDUCATION

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Rebuilding Rwanda: From Genocide to Prosperity Through Education

Introduction

Rwanda is on the verge of a breakthrough. Having weathered one of the worst humanitarian crises imaginable just fifteen years ago, and with an impoverished countryside plagued by HIV/AIDS, hunger, and malaria, Rwanda seems an unlikely place for an economic renaissance. Yet the nation's commitment to good government and support for free market solutions place it among the most likely countries to see rapid advancement in the coming decades. Such a future is far from guaranteed, and whether it comes to fruition depends largely on the country's system of education.

For Rwanda, more than for almost any other country, education holds the key to the future. Rwanda is a small, landlocked country in Central Africa (about the size of Maryland) with a population of just more than 10 million people. With the highest population density of any African country and a high growth rate, Rwanda cannot depend on its natural resources for economic

development. As a representative of the Rwandan Embassy explained in an interview, “Our resources are our people.” Rwandan officials recognize that if their country is to thrive, it cannot continue to depend on subsistence agriculture. In its Vision 2020 document, the government of Rwanda defines its medium-term goal as “transforming from an agrarian to a knowledge-based economy.”¹ The future of every country depends on its children, but this is particularly true in Rwanda, where 40 percent of the population is under the age of fourteen.²

There are many reasons to be optimistic about Rwanda’s prospects for developing a strong education system. The Rwandan government has demonstrated its commitment to education by making education the largest area of federal spending, accounting for 27 percent of the budget.³ “Education is a fundamental human right and an essential tool to ensure that all Rwandese citizens – women and men, girls and boys – realize their full potential,” the government declared.⁴ A United Nations analysis found that Rwanda is on track to achieve the Millennium Development Goals, including reaching universal primary education by 2015.⁵

Perhaps the most compelling reason to believe Rwanda can achieve its educational goals is the level of commitment demonstrated by its people. One story captures this devotion to education:

‘I live about 12 kilometers away,’ she says, indicating somewhere on the other side of the mountains. ‘My friends and I start walking to school at five o’clock each morning, and usually we arrive at eight. We are a little afraid of being attacked on the road because it’s dark, but the authorities have instructed their officers to keep watch for us.’ Marie-Claire is 14, and this year she hopes to complete Primary Two.⁶

Like Marie-Claire, Rwandans are eager for education, and in order to get it they are willing to go to unimaginable lengths.

As foundations and philanthropies look for investments that will foster democracy and support free market innovations, Rwanda’s education sector must be a prime candidate. Strengthening education in Rwanda will not only help the Rwandan people overcome poverty, but it will also reinforce the democratic institutions Rwanda has developed in the last fifteen years.

Historical Background

Colonial

The pre-colonial farmers and cattle raisers in Rwanda mostly learned their skills informally, by working with their relatives and other members of their tribe. Traditional festivals, coming-of-age ceremonies, and age-specific rituals served important roles in teaching children,⁷ but Rwanda’s formal education system did not emerge until it was colonized in the early 20th century. Rwanda was first colonized by Germany in the late 1800’s, but control of the nation was transferred to Belgium after the end of World War I. Unlike Congo to the west and Kenya to the east, Rwanda

did not experience the influence of powerful colonial business interests. Rather, the main colonial actors were missionaries who established churches and eventually opened schools throughout Rwanda.

The first school in Rwanda was formed in 1900 by Catholic missionaries. Eventually, the German and Belgian colonial governments became more involved in education, helping develop curriculum and providing funding, but the operation of schools remained almost entirely the responsibility of the church. In 1925, a convention formalized this relationship by creating a system of subsidized schools run by the church but supported financially by the state. These schools became known as *libre subsidie*, or assisted schools.⁸

Colonial-era education reflected and intensified the ethnic divisions in Rwanda. The Tutsi, favored by the colonial government as the Rwandan aristocracy, were also given preference in schools, even though the country was almost 90 percent Hutu. For instance, Astrida College, the most prestigious school in the country, enrolled 45 Tutsi students and just 9 Hutu students in 1932. In 1954, Astrida had 63 Tutsi and 19 Hutu students.⁹

Post-Independence

Rwanda was considered a development model before the genocide in 1994. Its economy was dependent mostly on subsistence agriculture, but the cash crops of tea and coffee also offered jobs and income. Although GDP grew from the time of independence in 1962 up to the genocide, the benefits were not consistent. In 1985, 40 percent of Rwandans lived in poverty. In 1993, 53 percent did.¹⁰

The church-state partnership continued even after Rwanda's independence, when the education structure from the colonial system was mostly preserved. Students started at age seven with a six-year primary education that was divided into two three-year cycles. Students who continued their education after primary school attended either a two- to three-year middle school to study agriculture or home economics or attended a five- to seven-year secondary school to focus on classics, general education, teacher training, or technical training.¹¹

The church continued to run most schools after independence. A 1965 agreement between the Catholic Church and the Rwandan government nationalized many of the church schools, and led to a system where schools were classified as public, private, or assisted. The state officially recognized the right of parents to school choice, allowing them to send their children to private schools if they could

The National University of Rwanda was targeted during the genocide, and only 19 percent of its staff remained four years later. In all, 153 staff members died, 106 disappeared, and 800 fled the country.

afford to do so.¹²

Ethnic quotas were implemented by the 1970's that required the student body of public and assisted schools to reflect the theoretical ethnic composition of the country: 90% Hutu, 9% Tutsi, and 1% Twa. These quotas also applied to tertiary institutions.¹³

In 1977-78, the education system was reformed to ruralize, vocationalize, and democratize education, including placing a stronger focus on the teaching of Kinyarwanda, Rwanda's native language. Primary education was extended to 8 years, and a few students still had access to 3 years of post-primary education, run primarily by churches. At this time, ethnic quotas were formalized. Another reform took place in 1991, which shortened primary school to 6 years, replacing the final two years with a three-year junior secondary cycle. The ethnic quotas were kept intact during this reform.¹⁴

Throughout the period between independence and the genocide, higher education in Rwanda was very limited. In 1972, there were only 751 post-secondary students in Rwanda, out of a population of about four million, or less than .02 percent.¹⁵

Genocide and Its Impact on the Education Sector

Rwanda today can only be understood with reference to the genocide and civil war it experienced in 1994. In about three months, more than 800,000 Tutsi and moderate Hutu were killed by Hutu militia groups.¹⁶ The genocide completely transformed every aspect of daily life in Rwanda, education no less than any other.

Not only was education changed by the genocide, but it also contributed to the ethnic tensions that led to the outbreak of killing.¹⁷ According to a Kenyan professor of African Studies, Michael Chege, much of the intellectual framework for genocide was formed in Rwandan Universities and spread by professors and scholars.¹⁸ Primary and secondary schools institutionalized the ethnic divisions between Hutu and Tutsi through their quota system, and some even started incorporating genocide into lessons. As the genocide broke out, teachers became involved. Emmanuel Mazimpaka, a local school inspector, tells of one instance: "There was a policy of dividing people. For example, there was a teacher who asked his class: 'When you have 100 Tutsis and then you kill one Tutsi, what is the number which remains?' The pupils who studied like this were taught that a group of people were there to be killed."¹⁹

When the genocide erupted in April 1994, schools closed almost immediately.²⁰ About 2 million Rwandans, approximately 20 percent of the population, fled to neighboring countries, mostly to Tanzania and Zaire (now, Democratic Republic of the Congo), but also to Uganda and Burundi.²¹ Most international aid for these refugees paid for food, water, shelter, and health, with little

supporting the education of refugee children. In 1995, for instance, \$43 million was spent on health-related support for Rwandan refugees, while only \$6.4 million went to education.²²

In Rwanda, the educational infrastructure was severely damaged during the genocide. The Ministry of Education in Kigali was shelled during the fighting and ceased operating entirely. Its staff members fled or were massacred.²³ Sixty-five percent of schools were damaged, and many, such as rural training centers, were never re-opened.²⁴ The National University of Rwanda was targeted, and only 19 percent of its staff remained four years later.²⁵ In all, 153 staff members died, 106 disappeared, and 800 fled the country.²⁶

Post-Genocide Reconstruction

In July and August of 1994, the Rwandan Patriotic Front (RPF), a Tutsi rebel group led by Paul Kagame, seized control of Kigali, brought the genocide to an end, and began the process of rebuilding the nation. From the start, education was a central goal of the new Rwandan government. The Ministry of Education reopened primary schools in September of 1994. Because so much of the education system had been damaged during the war, the government worked with local leaders to establish dates for reopening, and then announced over national radio when schools would reopen.²⁷ Secondary schools began reopening on October 20, 1994. Twelfth grade classes started first in order to keep those students on track to graduate so they could be the new primary teachers.²⁸

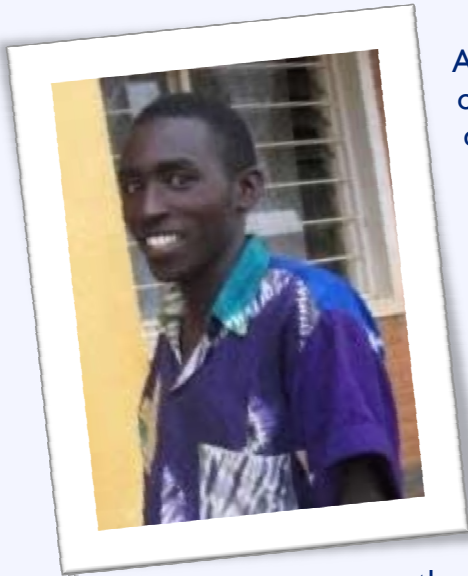
With the end of the genocide came a recognition that the ethnic biases and discrimination had to end. All forms of discrimination in education were banned, and the division of teachers and students by ethnic identity was abolished.²⁹

The intensity of the violence the country had experienced, and its reach to almost every Rwandan family, had a major effect on the return to school for Rwandan children. Nearly every child had experienced trauma, and 80 percent had had a death in their family.³⁰ Many families were hesitant to send kids back to school, since schools had often been a central location for the violence during the genocide.³¹ Many children came back from exile and waited a year or more before returning to school.³²

Seventeen new colleges, universities, and other higher learning institutions have been created since the genocide, and within just a few years Rwanda was already exceeding pre-genocide educational achievements.

The damage done to the educational system during the genocide was extreme, but the experience also galvanized the country around reform, leading to major changes and new investments in the education sector. Seventeen new colleges, universities, and other higher learning institutions have been created since the genocide, and within just a few years Rwanda was

STUDENT PROFILE: AMBROISE GHURENSI



Ambroise was born in exile in Uganda. Like many other Tutsi of their generation, his parents had fled to Uganda for safety during the tumultuous transition from Belgian to Hutu rule in the early 1960s.

In 1987, Ambroise's father responded to President Habyarimana's Hutu-dominated government's request for educated members of the Tutsi diaspora to return to Rwanda. He was able to locate a job in Bugesera, in southern Rwanda, but in 1992 conflict between the Hutu-dominated government forces and the Tutsi-led Rwandan Patriotic Front (RPF) army led to an escalation of ethnic tension throughout the country. "My father was denounced, and put into the Ruhengeri prison, where

they killed him." Some months later, as the family was trying to

survive on the meager earnings his mother was able to provide, Ambroise and his sisters suffered a second blow. "One day my mother did not come home from work. We became worried and I went out to look for her. I ran across a friend of my mother's, and asked him where she was. He looked frightened, and told me that he had been attacked coming home from work with my mother and some other friends, and that my mother was dead. I do not know how she died, and I do not know who killed her, but she was dead."

Ambroise and his two little sisters soon found themselves residing in an orphanage, le Centre Scolaire de Nyamata. In 1994, when the Interahamwe, Hutu paramilitaries, came to kill the Tutsi children, Father Minghetti, who ran the orphanage, paid them to leave. But in early April, as the situation deteriorated, Father Minghetti fled, leaving behind the children and some Rwandan nuns, along with a significant sum of money intended to protect the children should the Interahamwe return. Miraculously, Ambroise and his two sisters, as well as the other children of the orphanage, survived until the RPF captured the area.

Despite spending the last decade being shuttled between orphanages, Ambroise managed to complete his elementary and high school studies with success and was admitted to college last year at the Université Libre de Kigali (Free University of Kigali). He is now 21, and is majoring in economics and management. He hopes to eventually pursue a doctorate in economics and to use his education to help children who have struggled like himself. When he has a little free time, he likes to spend time with the younger children in the orphanage or play soccer with his friends.

Despite the challenges he has overcome, he is optimistic about the future. "We are the young and we are many," said Ambroise, "and we believe we can change Rwanda. When I finish my studies, I will get a job, and I will come back to the Centre Mémorial de Gisimba and I will help all the children who are still there. They need my help. But for now, we need help."

already exceeding pre-genocide educational achievements. In an analysis of education in Rwanda, the World Bank concluded that “despite the disruption to the education system caused by the 1994 genocide, Rwanda’s labor force had a better educational profile in 2000 than in 1991.”³³ This is testament to the incredible amount of attention Rwanda has focused on education as part of its reconstruction efforts.

The Importance of Education in Rwanda

The historical hand Rwanda has been dealt makes education a particularly important part of its short- and long-term development strategy. With the highest population density in Africa and limited natural resources, neither subsistence agriculture nor mineral extraction can support Rwanda’s economy. Rather, Rwanda must base its development strategy on its human capital, using education to make it globally competitive.³⁴ The Ministry of Education recognizes that they have an extra burden because Rwanda cannot turn to natural resources for economic growth. As such, it has identified as a top priority developing the service industry through training in information and communications technology.³⁵

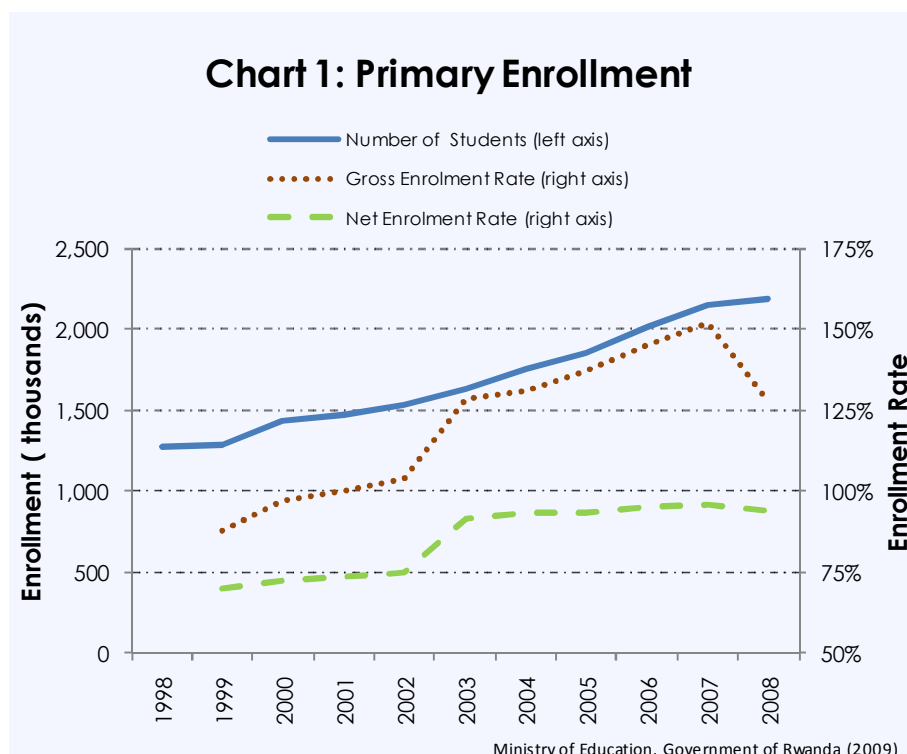
Rwanda faces the additional burden of having to rebuild its human resources after much of the educated class either died or fled the country during the genocide. Teachers, for instance, were often targeted during the genocide,³⁶ and only 19 percent of the staff remained at the National University of Rwanda four years after the genocide.³⁷ With 40 percent of the population below the age of 14,³⁸ and two-fifths of its children orphans,³⁹ Rwanda does not have the option of leaning on the educated class to support the country, because the educated class is largely non-existent. Rather, it must create a generation of well-educated citizens to rebuild the country.

Rwandan Education in Context

Primary Education

Primary education provides the academic underpinning students need for lifelong learning, and it serves Rwanda as the foundation of their education strategy. Universal primary education is a central goal of Rwanda’s policymakers, and the country has already made incredible progress toward providing free primary education to every Rwandan child.

For at least the past seven years, there have been more primary students in Rwanda than there are children of primary age. This is because many older children who never attended primary school or had to drop out have now re-enrolled. The presence of older children has kept the gross enrollment ratio of primary school well over 100 percent for the past seven years. In 2008, the gross enrollment rate for primary education was 128 percent. Net enrollment rates, which measure the percent of school-age children enrolled in primary school, are somewhat lower, but

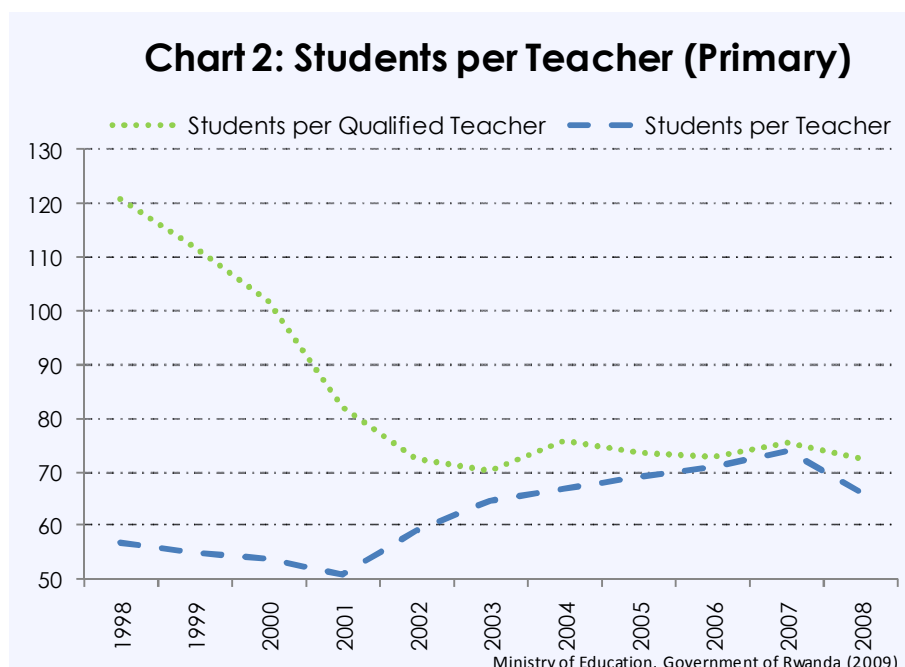


still quite impressive. In 2008, 94.2 percent of Rwandan children old enough for primary school attended, slightly lower than the previous year's rate of 95.8 percent.⁴⁰

Rwanda has also been quite successful at achieving gender parity in primary school enrollment. Since 1998, between 49 percent and 51 percent of primary students have been female, and there have been more female students than male students in each of the past six years.⁴¹

After the genocide, the primary curriculum was revised to include a broad variety of subjects, including Kinyarwanda, French, English, math, science, religion, ethics, civics, arts, physical education, and manual work. For students in the upper primary grades, history and geography were added. Upper primary students were also expected to complete homework. Primary school was structured as 31 half-hour periods each week, which students attended during five mornings and afternoons. Civics classes were also offered, which included teaching about the culture of peace, human rights, and reconciliation.⁴²

The biggest challenge Rwanda faces in its primary education efforts is the supply of teachers. Rwanda faces a shortage of teachers across the country, and the result is a high student-teacher ratio. In 1998, the number of students per teacher stood at 57, and it climbed to a high of 74 in 2007. In 2008, the student-teacher ratio had dropped a bit to 66 to 1, but it remains at a level that continues to compromise student learning. Compounding the problem is the fact that many of the primary teachers are not considered qualified by the government of Rwanda. The ratio of students to qualified teachers has improved remarkably since 1998, when there were over 121 students for



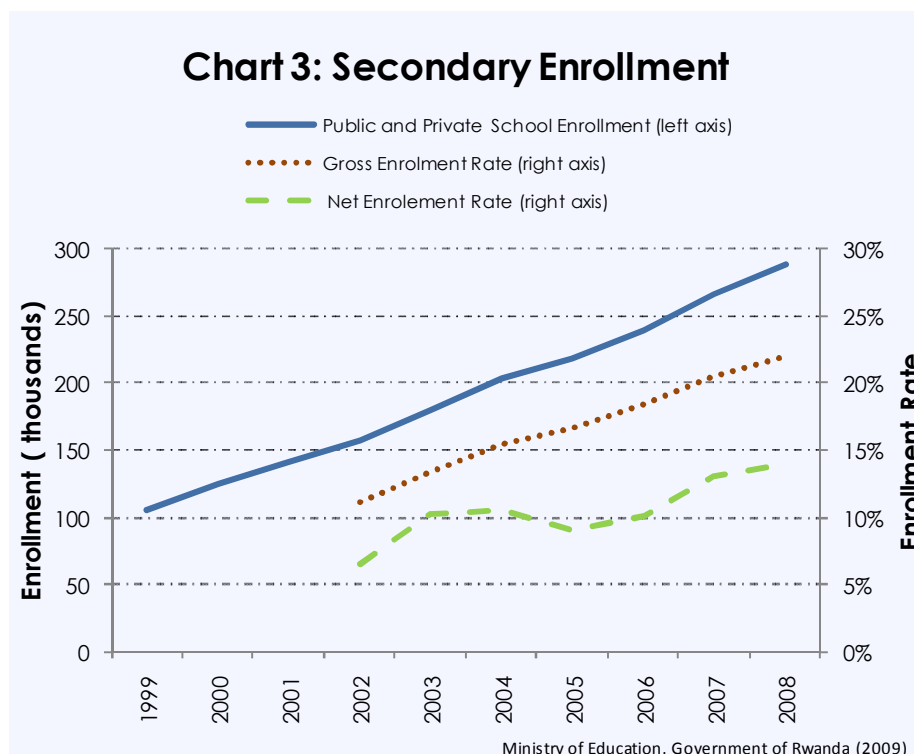
each qualified teacher. By 2008, the figure had fallen to 73 students per qualified teacher – a clear improvement, but still far from ideal.⁴³ The data on qualified teachers are somewhat hard to interpret, however, because the Ministry of Education does not clearly explain what metrics they use to determine if a teacher is qualified.

Not only are primary teachers in short supply, but there are too few schools, many of which are lacking in terms of their facilities. In 2008, Rwanda had 2,432 primary schools.⁴⁴ A World Bank analysis found that more than half (52%) of primary schools have classrooms in poor condition.⁴⁵ Furthermore, just over half (53%) of Rwandan households were within 30 minutes of a primary school in 2000.⁴⁶ Schools could be built closer to households if there were more, smaller, schools. Currently, the average school size for a primary school in Rwanda is about 900 pupils.⁴⁷ Although small schools are often more expensive per student to build and operate, a World Bank analysis finds that the savings accrued from larger schools stops once a school reaches a size of about 400 students. Limiting school size to 400 students would allow for schools to be more spread out and more conveniently located without costing more money.⁴⁸

Another challenge facing primary school, however, is keeping students there. In 2006, the Ministry of Education found that “the costs of schooling are still too high for poor families, and the percentage of children who actually complete a full cycle of primary school (51% in 2004) is below the Sub-Saharan average.”⁴⁹ Increasing the completion rate of primary school is important because despite the school quality issues Rwanda faces, students who complete the 6-year primary education remain literate and numerate as adults,⁵⁰ giving them the minimum skills they need to function in the modern economy.

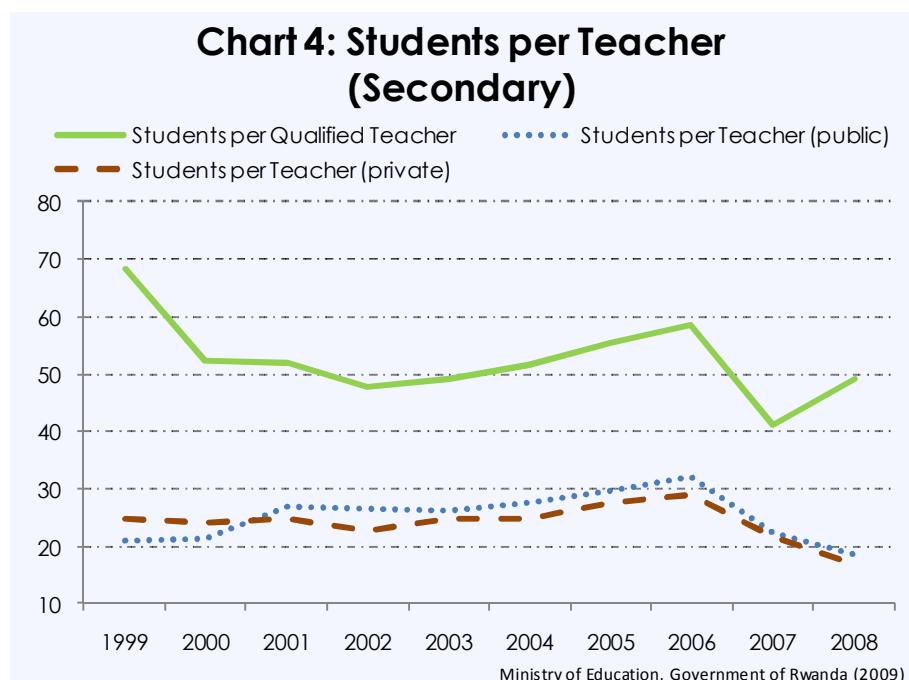
Secondary Education

While Rwanda has made great progress in achieving near-universal primary education, the same cannot be said for secondary education. Enrollment rates in secondary education remain low, even though enrollment has been steadily climbing since the genocide. From 1996 to 2004, secondary enrollment grew at a rate of 20 percent per year,⁵¹ but the overall net enrollment rate remains at just 14 percent.⁵² In rural areas, the percent of children in secondary school is even lower.⁵³



Secondary schools also experience worse gender parity than primary schools. In 2008, there were only 92 female secondary students for every 100 male students.⁵⁴ Although gross enrollment rates for male and female students have been increasing, girls continue to lag behind their male peers in enrollment.

In 2008, there were 689 secondary schools in Rwanda. Of these, 68 percent were public schools, and 32 percent were private.⁵⁵ Public schools in Rwanda perform better, overall, than private schools. The pass rate on secondary exams is 75 percent for state school students, 72 percent for students at assisted schools, and just 47 percent for private students.⁵⁶ Private schools also have the largest range in average scores on the secondary exams, so although *on average* private schools perform significantly worse than public schools, some private schools have the best results in the country while others have the lowest results in the country.⁵⁷



The student-teacher ratio in secondary schools is much lower than in primary schools. Here, private schools do better than state schools: the number of students per teacher in private schools was 16.7 in 2008, while in public schools it was 18.7.⁵⁸ There are still many teachers who do not meet the government's qualification criteria, and the ratio of students to qualified teachers across schools remains at 49:1.

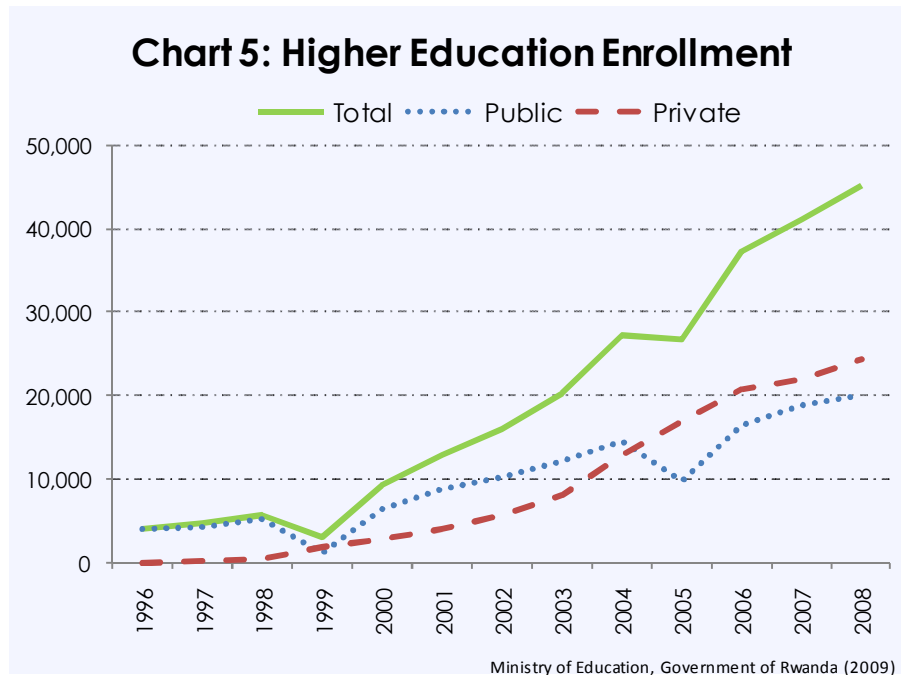
Tertiary Education

Prior to the founding of the National University of Rwanda (NUR) in 1963, all higher education was facilitated by the Catholic Church. NUR was originally made up of three schools, the Faculty of Medicine, the Faculty of Social Sciences and the Teacher Training College, and had a total of 49 students during its first year. Enrollment gradually rose, reaching 921 in 1980, 1,572 in 1985, and 4,550 in 2000.⁵⁹ In 2008, NUR had an enrollment of 6,430, lower than its peak enrollment of 8,082 in 2006.⁶⁰

While NUR grew, new colleges and universities were created. In 1994, just before the genocide, Rwanda had thirteen institutions of higher learning. By 1999, seven of the pre-war higher learning institutions had closed, and nine new ones had been formed.⁶¹ Today, there are 22 tertiary institutions: seven government institutes and universities, eleven private schools, and four new public colleges.⁶² There are now more than 45,000 students enrolled in higher education.⁶³

The second-largest public university, after NUR, is the Kigali Institute of Education (KIE). KIE was founded in 1999 to train teachers⁶⁴ and currently has an enrollment of 4,472.⁶⁵ The Kigali Institute

of Science and Technology was founded in 1997 with the specific goal of supporting the applied sciences and helping advance Rwanda's information and communications technology industry.⁶⁶ The largest university in Rwanda, the Université Libre de Kigali (ULK), was the first private university to grant its own degrees. Formed in 1996, ULK now enrolls 8,686 students.⁶⁷



Rwanda's higher education system has improved dramatically since the genocide, expanding in enrollment more than ten-fold. In 2000, there were 100 students for every 100,000 people.⁶⁸ By 2004, this rate had doubled to 200.⁶⁹ Today, there are about 450 higher education students for every 100,000 Rwandans,⁷⁰ an improvement on previous years and comparable to other sub-Saharan African countries. However, this enrollment rate is still quite low and signifies how hard it is for Rwandan students to make it all the way to university. One barrier to entry is the cost of higher education. Survivors Fund, a non-governmental organization that supports genocide survivors with services including education, budgets between \$450 and \$900 for each university student it supports. These costs are prohibitive for the vast majority of Rwandans unless they can receive government or private support.

Comparison with Neighboring Countries

Compared with its neighbors, Rwanda's education system is doing quite well, with some caveats. Rwanda's gross primary enrollment is better than most sub-Saharan countries,⁷¹ although it is somewhat inflated by the presence of older students who are repeating grades or entered late. The high enrollment is not matched with a large number of teachers, though, and Rwanda's pupil-teacher ratio is higher than most of its neighbors.⁷²

Rwanda also has lower socio-economic disparities at primary level than other countries, even for orphans and other vulnerable children.⁷³ However, overall educational spending is skewed dramatically toward the best-educated. Rwanda's share of education spending that goes to the 10 percent best-educated is third highest of all sub-Saharan African countries.⁷⁴

At the secondary level, Rwanda has a larger percentage of students in private schools than neighboring countries.⁷⁵ This may or may not be a good thing, given the low average results from private schools.

Current Shortcomings

Rwanda has made incredible progress in a number of areas, especially given the challenges it faced following the devastating genocide in 1994. In particular, primary, secondary, and tertiary enrollment has climbed rapidly over the past decade and a half. Nonetheless, Rwanda's education system has a number of current shortcomings.

Lack of teacher training

The most recent statistics from the Ministry of Education show that only 36 percent of secondary school teachers were qualified in 2008. This is a sharp decline from the 53 percent who were qualified in 2007. Not only did the percent of teachers who are qualified decline, but the raw number of qualified teachers also fell, from 6,458 to 5,849. It is not clear whether this is due to teachers leaving the profession or the government's adoption of more strict criteria for determining who is considered qualified.⁷⁶ Unfortunately, this is not a new problem. In an interview, Claudel Nisingizwe, who was educated in Rwanda and now works as an engineer in the United States, explained, "When I was in high school, my teachers had not gone to college. A few had gone, but they had either failed or only got a two-year degree." As student enrollments continue to rise, Rwanda needs to find ways to ensure the supply of qualified teachers keeps up.

High primary pupil-teacher ratio

A regression performed by the World Bank finds that high student-teacher ratios have a statistically significant effect on examination results.⁷⁷ This is particularly important for Rwanda, which has a student-teacher ratio of 66 to 1 in primary schools. Even more troublesome is that except for the past year, the student-teacher ratio has been increasing since 2001. With such high numbers of students for each teacher, many teachers end up double-shifting, where they teach one group of children in the morning and a different group of children in the afternoon. This lowers the amount of time each student spends in school and divides the teacher's attention.

FEATURED ORGANIZATION: FOUNDATION RWANDA

An estimated 500,000 Rwandan women were the victims of rape during the 1994 genocide. Today, there are about 20,000 children born from these sexual assaults, and they will turn 15 this year. Often turned away by their relatives and neighbors for choosing to keep their child, these mothers have little to offer their children except the hope for a better future.

Foundation Rwanda, begun in 2006 by photojournalist Jonathan Torgovnik and filmmaker Jules Shell, seeks to help these mothers give their children the opportunities they never had. Torgovnik and Shell interviewed 40 women who had had children after being raped, and found that none of the mothers could afford to pay secondary school fees for their children.

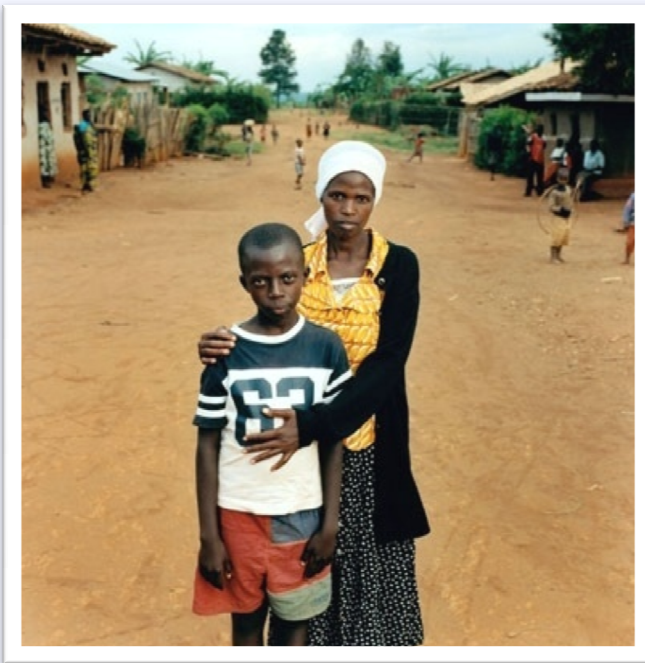


Foundation Rwanda's goal is to provide the means to attend secondary school for 1,500 Rwandan children born of rape. Not only are school fees covered, which amount to about \$150 per student per year, but families are also provided with school uniforms, school supplies, money for transportation, and shoes. The mothers are also connected with existing psychological and medical support services. Foundation Rwanda has partnered with a number of local NGOs in Rwanda, including Survivors Fund,

AVEGA, and Solace Ministries, which assist in the identification of recipients and the distribution of aid. The distribution of assistance is performed in a confidential manner in order to respect the privacy of the families and avoid further stigmatizing the children. The scholarships are paid directly to schools, and even the principals do not know why the students are receiving the funding.

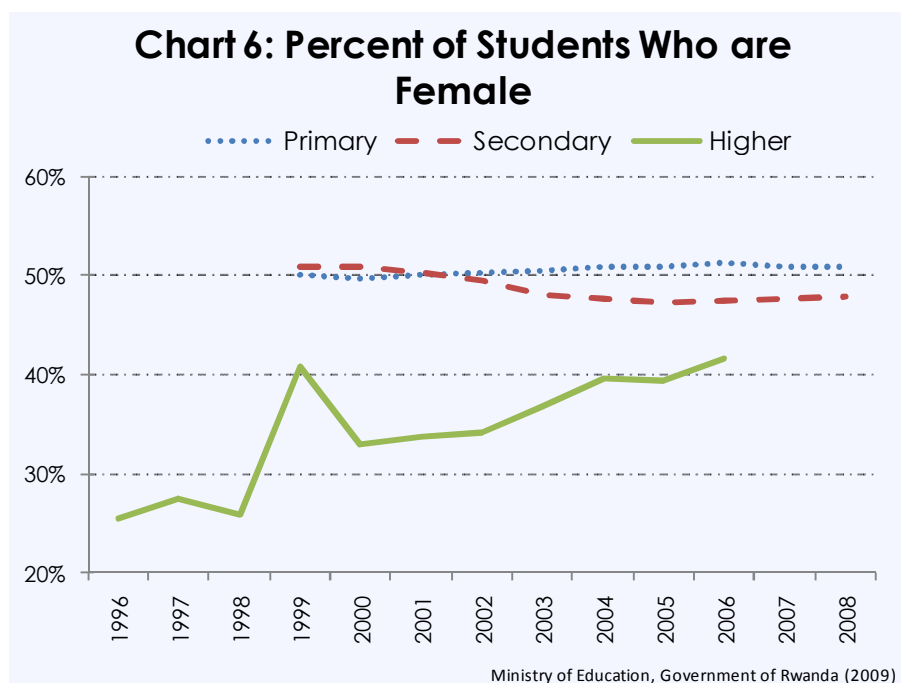
Many of the mothers have conflicted feelings about their children, who are a constant reminder of the trauma they experienced. But even though most of the women do not know what will happen tomorrow, they all know they want their children to receive an education.

More information at
www.foundationrwanda.org.



Gender parity

The enrollment rate for girls in Rwanda is better than in most neighboring countries, especially at the primary level. However, girls underperform on examinations.⁷⁸ At the primary level, only 18 percent of girls pass end-of-cycle exams, as compared with 29 percent of boys. In *tronc commun*, the three years after primary, 56 percent of boys but only 29 percent of girls pass their examinations. At the secondary level, girls again under-perform: 63 percent of girls and 76 percent of boys pass their exams.⁷⁹ Some of the barriers female students face include historic marginalization, poverty, traditional gender roles, gender-biased curriculum and teaching methods, lack of facilities, discrimination in public institutions, and gender-based violence.⁸⁰ While Rwanda has taken significant steps to improve female enrollment, more work needs to be done to ensure that female students are learning at the same level as male students.



Dropout and grade repetition

One of the key challenges for Rwanda's education system is increasing the number of students who complete each cycle without dropping out.⁸¹ Primary completion improved markedly from 1990 to 2000, with 73 percent of students staying in school through 6th grade in 2000, as compared with 44 percent in 1990.⁸² However, increasing numbers of students have to repeat grades in order to keep from dropping out. In 1990, 11 percent of students repeated a grade while they were in primary school. By 2000, this figure had increased to 30 percent.⁸³ This is a major problem, as it creates an unsustainable backlog of students, crowding classrooms and keeping

younger students from receiving the attention they need. The World Bank proposes setting 10 percent as a medium-term target for repetition rates at the primary level.⁸⁴

Inequality

Unfortunately, the progress Rwanda has made in education since the genocide has not been evenly distributed across the country. Rural and poor children lag far behind wealthier and urban students. The gross enrollment rate for rural students in secondary education was 49 percent that of their urban peers in 1992, and by 2000 it had fallen to just 18 percent of the gross enrollment rate in urban areas. For higher education, the numbers are even worse. The rural gross enrollment rate for tertiary education in 2000 was just 6 percent of the urban gross enrollment rate.⁸⁵ Economic inequality is even worse than the urban-rural divide. Only one percent of students from the bottom economic quintile attend secondary school, while 19 percent from the top quintile do.⁸⁶ The gross enrollment ratio in higher education for students from the bottom two economic quintiles is 3 percent that of students from the top quintile.⁸⁷ The inequality translates to where money is spent. The best educated 10 percent receive more than 70 percent of cumulative education spending by cohort. This makes Rwanda among the least equitable countries in sub-Saharan Africa when it comes to education spending.⁸⁸

Orphans

Rwanda has an extremely high rate of orphanhood. Not only does it face the scourge of AIDS affecting its neighbors, but many Rwandan children lost one or both parents in the genocide. Although good data on the rate orphanhood are hard to find, the percent of orphans among children age seven to fourteen around the year 2000 is estimate at 40 percent in Rwanda, twice the rate of Uganda, which is the next highest of the East African countries for which data are available.⁸⁹ The Rwandan government offers support to orphans, but they still have difficulty getting the education they need. Although primary enrollment is high in Rwanda, orphans, especially double orphans and those who have lost their mother, “account for most of the out-of-school population.”⁹⁰ Rwanda needs to continue to focus on its orphans, pro-actively providing extra support to help them succeed in school.

Investing in Education

The current focus placed on education by the government of Rwanda signals both the central importance education plays in the nation’s development and the government’s commitment to developing its citizenry for the future. Yet due to Rwanda’s poverty, even a large investment on the part of the government is insufficient to provide the educational resources the country needs. The result is a nation with a deep commitment to education but with vast unmet needs. This provides numerous opportunities for organizations to make targeted investments and have a

dramatic impact. As one non-profit director explained in an interview, “there is no easier way to make a difference in the world than by supporting education in Rwanda.”

Spending on Education

Education is a top priority for the government of Rwanda, accounting for 27 percent of the federal budget.⁹¹ The Rwandan government spent \$117 million on education in 2006, and plans to increase its spending on education to \$400 million annually by 2015.⁹²

In 2001, government spending on education reached an all-time high. At the time, education spending accounted for 5.5 percent of GDP, a sharp increase from the level in 1981 when education spending was 2.7 percent of GDP. Much of the increase in education spending went to capital investments, however, and the amount budgeted for daily operations represented just 3.3 percent of GDP, close to the level maintained throughout the previous two decades.⁹³ The percent of government education spending that went to capital investments in the late 80's ranged from two percent to seven percent. In the late 1990's, it ranged from 20 percent to 40 percent.⁹⁴

Spending on education does not only come from the government, however. Household spending on education is equivalent to about 40 percent of the government education budget.⁹⁵ In 2000, average household spending was \$5 per year for a student in public primary school, \$98 per year for a student in public secondary school, and \$318 per year for a student attending a university. The biggest expense for primary students is the uniform, while fees account for the largest portion of secondary and university household spending.⁹⁶

Primary education accounts for the largest portion of government spending, although its share has been falling. The portion of education spending that went to primary education fell from 70 percent in 1996 to 45 percent in 2001, while the portion going to higher education rose from 15 percent to 37 percent.⁹⁷ The increased spending on higher education takes place even as only a small percentage of Rwandans ever reach that level. The result is that the amount the government spent on each local tertiary student in 1999 was 95 times more than the amount spent on each primary student. Each study abroad student was 275 times more expensive to support than each primary student.⁹⁸

Most Pressing Needs

Rwanda's government is happy to note where it has made significant progress since the genocide, but it is also quick to identify pressing needs and challenges facing the country. Once it identifies an area in need, the government sets tangible goals and

Education is a top priority for the government of Rwanda, accounting for 27 percent of the federal budget. The Rwandan government spent \$125 million on education in 2006, and plans to increase its spending on education to \$400 million annually by 2015.

develops plans for improvement. This is particularly true when it comes to education. The Ministry of Education identified nine major policy goals in its 2003 Education Sector Policy document. The first two have already been nearly achieved, and progress is being made in the other areas. They are: 1) Reach universal primary education by 2010; 2) Eliminate the gender gap in secondary school; 3) Provide qualified secondary school teachers for every classroom; 4) Increase the participation, especially of girls, in higher education; 5) Establish an accrediting organization for higher education to ensure quality; 6) Integrate HIV/AIDS education into the national curriculum; 7) Focus on information and communications training; 8) Raise the literacy rate to 85% by 2010; and 9) Decrease double shifting from 31% in 2004 to 6% by 2015.⁹⁹ Three years later, Rwanda set down the specific goals it hopes to achieve by 2015, summarized in the following table.

2015 Targets		
Target	2004	2015 Goal
Primary completion	51%	112%
Dropout rate	14%	2%
Repetition rate	19%	3%
Double shifting	31%	6%
Secondary Gross Enrollment Rate	16%	43%
Transition Rate from primary to lower secondary	(n/a)	75%

Ministry of Education, Government of Rwanda (2006), p4-5

A representative from the Rwandan embassy in Washington, DC, explained the government's goals in an interview. While the donor community and development partners focus mostly on primary education, she explained, the government of Rwanda recognizes that they cannot build a country with just primary and secondary graduates. Rwanda is very committed to higher education, and finding ways to develop the higher education sector is one of President Kagame's principal goals.

These goals, presented by the government of Rwanda, provide a useful reference for the medium-term objectives currently shaping education policy. While outside partners can make a difference in helping achieve these goals, they should not feel compelled to work solely within their boundaries. Rather, one advantage private actors bring to educational investment is the ability to dream big and implement ambitious programs that are not already part of the government's plan.

Trade-Offs Between Primary, Secondary, and Tertiary Education Investments

The government of Rwanda and donor organizations face the decision of where to spend their limited funds. In order to maximize the effectiveness of all investments, the benefits of poverty

reduction through primary education must be weighed against the country's larger vision of becoming a knowledge-based economy through higher education.¹⁰⁰

For decades, development agencies focused their interventions on primary and secondary education because that was the most effective way to improve economic growth and reduce poverty. The entry costs to create a primary school were low and the demand for primary education was high. Data showed that the more literate the citizenry, the lower the rate of poverty. Tertiary education was often ignored as regressive and pro-elite.¹⁰¹ Only few benefitted from college aid, making it politically unpopular and a lower priority in a country filled with primary-aged children. In addition, many studies found higher returns to education for primary and secondary schooling than for higher education.¹⁰² New evidence now suggests that higher education actually yields a higher rate of return, and international development organizations like the World Bank are beginning to acknowledge tertiary education's importance in fostering economic development.¹⁰³

Rates of Return to Education by Level, 2000

Level of Education	Rate of Return
Primary	13.2%
Secondary Vocational and Technical	18.4%
General Secondary	21.3%
Higher Education	46.9%
<hr/>	
Average Rate of Return	17.5%

The International Bank for Reconstruction and Development (2004), 170

While the rate of return for college graduates is important, countries and investors should account for the external benefits of a higher education system for the country as a whole. A well-educated citizenry improves democracy and also creates a workforce that can contribute to development and infrastructure needs.¹⁰⁴ The more Rwandans that receive college training in science and technology, the more equipped the country is to address its infrastructure needs. In addition, it is expensive and unsustainable to give bursaries for students to study abroad, which increases the importance of having a well-developed higher education system in Rwanda.

Investment in tertiary education is not without drawbacks. The World Bank finds that “although it is true that a modernizing economy requires highly trained workers to function well, experience shows that producing such workers faster than the labor market can employ them in relevant jobs typically does not accelerate economic growth but instead creates educated unemployment or underemployment and, as a consequence, social frustration and unrest among the affected individuals.”¹⁰⁵ An estimated 50,000 African-trained PhD's are currently working outside Africa.¹⁰⁶ To minimize these risks, the World Bank suggests a strategy that ensures investment in tertiary education is made with Rwanda's interests in mind as well as that of the individual students. Scholarships and bursaries should be distributed to poor families or orphans and should be used to study fields that will address the needs of the community.

Current Interventions

Primary Level

By far, the biggest private actors in primary education are the churches, particularly the Catholic Church. Seventy percent of primary schools are owned by churches,¹⁰⁷ although their operations are typically funded by the government. In 1999, only 1.5 percent of schools were fully private. Of the assisted schools, 60 percent were Catholic and 34 percent were protestant.¹⁰⁸

In addition to the church, primary education in Rwanda receives a good deal of support from the United Nations, as part of UNESCO's program for implementing Education for All. Universal primary education is one of the UN's Millennium Development goals, which receive increased levels of institutional support.¹⁰⁹

Secondary Level

Because of the low enrollment levels relative to primary school and the fact that students are charged school fees, secondary education is an area that attracts a good deal of outside investment. Interventions range from the relatively non-intensive (paying school fees for children) to the very hands-on (building a village for vulnerable youth).

One innovative program aims to teach information and communications technology while connecting schools across Africa. A partnership between the Rwandan Government, CISCO Systems, Microsoft and the NEPAD e-Africa Commission launched an e-Schools demonstration project at Muhura School, Buyumba, in 2006. "In each country, the programme aims to transform all African secondary schools into NEPAD e-Schools within five years of implementation start date and all African primary schools within ten years of implementation start date. In total, more than 600,000 schools across the continent will enjoy the benefits of ICT and connectivity to the NEPAD e-Schools Satellite Network upon completion of the project."¹¹⁰ Six secondary schools were chosen for the demonstration project in Rwanda. Each demonstration school receives at least 20 computers to set up a computer lab, as well as a server, internet connection, and peripherals such as printers and a scanner.¹¹¹

A new organization active in secondary education is Foundation Rwanda, whose mission is to support the secondary education of children born of rape during the 1994 genocide. Currently supporting 150 students, Foundation Rwanda provides funds for school fees, uniforms, books, transportation, and even links the mothers to existing psychological and medical support services. Foundation Rwanda works with local non-governmental organizations in order to identify the children and provide the funding in a confidential, sensitive manner (see page 16).

STUDENT PROFILE: CHRISTELLE UMUTONI



Christelle is the youngest daughter of Jean Basesekaza and Grace Mukazayire. "My father worked in a travel agency in Kigali and my mother worked for a business enterprise. We were not poor. In 1990 we all moved to Kigali to be closer to my father and because my mother had found a better position there."

The genocide of 1994 took place during a school vacation, while three of the children, including Christelle, were visiting their grandparents in Nyanza. Christelle's parents and oldest brother were killed in Kigali. In Nyanza, Christelle's grandparents, extended family, and her oldest brother were also killed.

Christelle describes how she and her brother survived: "I hid with my brother in the forest. We hid there for quite a while; for months. After the war, we discovered that an aunt of ours in Kigali had survived. She had been raped by the Interahamwe during the genocide. We went to stay with her, but she had contracted AIDS from being raped and died in 1997." When she was living with her aunt in Kigali, Christelle joined a traditional dance troupe, practicing an art form which had been prohibited by Major General Juvenal Habyarimana's authoritarian government. When her aunt died, it was through this dance troupe that she was brought to the attention of the Gisimba orphanage and came there to stay.

Christelle and her brother Eric continue to live in the shadow of the genocide. "It was only last year that they buried my family at Nyanza. It was during a big commemoration of the genocide and its victims. I did not enjoy returning to Nyanza. There were all those hills that used to hold the houses of the people that I knew and loved, and now there is nothing left. There are no more houses on those hills and no more people there. My story is a sad one."

In 1997, after her aunt died, Christelle began her secondary studies, which she completed in 2002. She focused on the humanities and learned about an assortment of topics, including psychology, history, literature, philosophy and sociology. Her first three years were at Kigali, but after she garnered a remarkably high score on the third-year exam, she was given a scholarship to go to a boarding school in Ruhengeri for the last three years.

Now studying sociology at the university, Christelle explains why she chose that subject: "I want to understand African society. One reads all these stories about problems in Africa. One could call it the African curse, but then again, we see these problems everywhere in the world. That's why I have so much hope for the future, because they can be solved."

Christelle is thrilled to be able to pursue her university studies. She would like to go on to get her doctorate and find a job. She plans to spend much of her future income helping orphans like herself complete their studies. She would also like to help rebuild houses in her home region, so her family's history is not forgotten. The Interahamwe tried to erase all traces of her family and community, but she is determined to keep their memory alive. Christelle continues to take part in a traditional dance troupe when she finds time between her studies and looking after her brother.

Another organization working with vulnerable youth at the secondary level is the Agahozo Shalom Youth Village (ASYV). ASYV is a living and learning community for the most vulnerable students from across Rwanda modeled after villages that were developed in Israel following the holocaust. ASYV takes a holistic approach to serving the children, with formal and informal education, and a realization that these students need community as much as they need training. The village is set up to serve those most in need, and there are no admissions tests to select the participants; rather, local partners in each district of the country choose children who they know need the help. The village consists of a school run by Rwandan teachers who have received additional training in Israel and a separate living community supported by live-in house mothers and international volunteers. ASYV opened in January 2009, and it was designed with replicability in mind so that if it succeeds it can be copied across the country (see page 28).

Tertiary level

In an interview, representatives from the Rwandan Embassy repeatedly asserted the importance of building partnerships to improve the higher education sector in Rwanda. Fortunately, some partnerships are already underway. Kigali Institute of Education has partnered with Kenyatta University in Kenya to “develop academic research links, collaboration and cultural exchange. The cooperation will involve exchanges of faculty members and students; joint research activities; sharing of academic materials and more.”¹¹²

Improved technology allows for creative new ways of connecting universities in the United States with those in Rwanda. The Massachusetts Institute of Technology has made some courses available online that students in Rwanda can take.¹¹³ Because the cost of making lectures available to additional students is minimal, such a model could provide extensive learning opportunities for Rwandan university students, especially in subjects that lack faculty in Rwanda.

USAID is currently funding grants to support partnerships between American and Rwandan Universities. One grant is supporting the collaboration of Durham Technical Community College and the Kigali Institute of Science & Technology and another is going to the University of the Pacific and Rwanda’s School of Banking & Finance. A USAID press release explains that “these paired institutions will use the grants to develop plans to address regional and national economic development priorities.” Each grant is for \$50,000.¹¹⁴

In addition to partnerships, foreign universities support Rwandan higher education by offering scholarships and opportunities for Rwandans to study abroad. Starting in 1999, Dundee University in Scotland offered free tuition and support for living expenses to Rwandan women.¹¹⁵ In the United States, the Rwandan Embassy has developed relationships with a number of American colleges and universities, including Oklahoma Christian University, Carnegie Mellon, William Penn, George Washington University, and the University of Texas. Because there is a risk that Rwanda’s

most talented students will leave Rwanda for university and never return, study abroad participants are provided a G-I visa that requires them to return to Rwanda after they graduate. Study abroad students also sign a contract agreeing to return to Rwanda, but the Embassy officials said that “even if students stay in the United States, we have helped them by providing an education. And Rwandans that do live abroad are very supportive of Rwanda and often return later in life.”

Although receiving an education abroad often provides the best opportunities for Rwandan students, doing so is only an option for a select few of the top students. Studying abroad is also very expensive when compared to attending university in Rwanda, which means that the number of students that can be served is limited by the cost. Orphans of Rwanda (ORI) takes a different approach, supporting highly vulnerable but highly successful Rwandan students to attend university in Rwanda. Not only does ORI provide full scholarships to its 160 participants, it also gives them housing, healthcare, supplemental language instruction, and a stipend that they can either use for living expenses or send home to help support their families.

ORI sees its mission as crucial to helping Rwanda escape poverty. Michael Brotchner, ORI’s executive director, explained the situation in an interview: “With a population of 10 million people, Rwanda cannot depend on subsistence agriculture. The only way out of poverty is by thinking their way out.” ORI understands that it is helping its 160 participants, but it sees its impact as reaching far beyond them. “We really ought to change our name to ‘Leaders of Rwanda’,” Brotchner said, “because our goal is to have our participants be the ones who transform Rwanda into a developed country.”

Policy Pathways

Rwanda has made remarkable progress in the past fifteen years, but there are still a number of ways in which it can strengthen its education sector. The biggest barrier to implementing reforms is funding. Rwanda is a poor country with limited resources, and faces trade-offs with each investment it chooses. These limits mean that every decision Rwanda makes about where to put its money is all the more important, and it also means that there are major opportunities for private sources of funding to make an appreciable impact. Such support often comes from private foundations, but there is also a huge potential for grassroots fundraising to support educational organizations in Rwanda. ORI gets 65 percent of its funding from individual donations, fundraisers, and special events, and Foundation Rwanda is almost entirely funded by grassroots contributions. Partly due to their knowledge of the horrors Rwanda experienced during its genocide, people around the world are willing to support efforts underway to help raise the country out of poverty.

Provide secondary school free of charge

With secondary school fees of about \$150 per year, post-primary education is impossible for the majority of families in Rwanda, where per capita income is just \$370.¹¹⁶ A United Nations report finds that one of the most important education interventions is to increase “the number of children (especially girls) transitioning from primary to secondary school and then completing secondary school.”¹¹⁷ Rwanda’s primary enrollment rate is already quite high, but the drop-off after primary school is immense. Addressing this key transition period would help advance students past the levels of basic literacy and numeracy. Eliminating school fees for all current secondary students would cost about \$43 million per year. If every school-age child enrolled in secondary school, the annual cost of eliminating school fees would be about \$196 million.¹¹⁸ However, investments in secondary education are almost certain to pay for themselves as students become more productive workers.

Until the government of Rwanda is able to provide secondary school free of charge, supporting the cost of secondary school is an area in which private organizations can have a lasting impact. A number of organizations already exist in Rwanda that pay for school fees for children. Supporting these organizations can make sure students can continue their education after primary school. This is the model adopted by Foundation Rwanda, which works with Survivors Fund, AVEGA, and Solace Ministries. Foundation Rwanda raises funds that its partner organizations then use to pay the school fees for participating students.

Open new schools

The average primary school in Rwanda has 900 students¹¹⁹ and in 2000 almost half of Rwandan families lived more than 30 minutes away from the nearest school.¹²⁰ By creating more schools, each school would be smaller and more conveniently located for students. The cost per student would not have to increase, as the World Bank found that the economies of scale cease once schools reach a size of about 400 students. While most of the new schools need to be created by the state, there are also opportunities for new private schools.

For private organizations willing to invest the time and energy, as well as the money, founding a school can have the greatest impact of any investment. Starting a school takes an incredible amount of work, and requires the selection of staff, the building of facilities, and the recruiting of students. When Bishop John Rucyahana, co-founder of Bridge 2 Rwanda, assumed responsibility for the Shyira Diocese in Rwanda in 1997, he knew that the key to Rwanda's redemption was through a new generation, comprised of an estimated 400,000 orphans. He founded Sonrise School, a boarding school with the vision to set the standard for academic excellence and community based leaders. The school opened in 2001 with 200 students in grades one to four and has added an additional grade each year since. Today, more than 1,000 students, mostly orphans and some fee-paying students, attend Sonrise. The first class will graduate from high school in 2010 and hopes to be welcomed to the brand new Muhabura University, which will sit on a 25 acre site

donated by the Government of Rwanda. The Sonrise School shows that the enormous amount of time and energy put into starting a school can have a profound impact: in 2006, after only four years in operation, Sonrise School posted the top national exam scores of any primary school in Rwanda.¹²¹

Make higher education more accessible to poorer students

Higher education is one of the scarcest resources in Rwanda, even as the country builds new universities and institutes. Although limited space accounts for some of the scarcity, a lack of funds keeps many capable students from ever even dreaming of attending university. Tuition varies from institution to institution, ranging from about \$450 to \$900, depending on what major a student pursues.

Unfortunately, whether a student goes to university in Rwanda depends largely on how wealthy his or her family is. The higher education enrollment rate for students from the top income quintile is more than thirty times higher than the enrollment rate for students from the bottom two income quintiles. This inequality is partly due to the lower rates of secondary school attendance for poorer students, and making secondary school free would increase the number of disadvantaged students who are qualified for higher education. By making all university scholarships need-based, Rwanda could ensure that its limited funds go to those students who would benefit most, rather than paying for a student whose family could afford tuition.

Private organizations can also play a role by helping needy students pay for higher education. Orphans of Rwanda offers scholarships to its participants, but budgets \$3,000 per student each year. The extra money goes to support housing, food, healthcare, supplemental training, and a living stipend. While this level of support enhances the educational experience for the students, it provides support beyond what is needed for education. The scholarships offered by Orphans of Rwanda are among the most generous in the entire country.

Provide school uniforms for needy students

A simple way to make a difference in education is by providing school uniforms for primary and secondary students. Although they often cost just a few dollars, the burden of purchasing uniforms still keeps too many children from attending school. A program in Kenya that provides uniforms to girls in the sixth grade and then gives them another uniform if they are still in school 18 months later found that this was one important element that led to a one-third decrease in the dropout rate and the pregnancy rate among the participants.¹²² Where possible, the government of Rwanda should provide funding for similar projects. Private organizations could also help by giving away school uniforms.

FEATURED ORGANIZATION: THE AGAHOZO SHALOM YOUTH VILLAGE

After hearing a speech at the Tufts University Hillel about the plight of orphans in Rwanda, Agahozo Shalom Youth Village (ASYV) founder Anne Heyman wondered, “What was done to take care of Jewish orphans after the Holocaust?” Heyman discovered a network of residential living communities built for orphans in Israel. These youth villages provided not only shelter and education to traumatized children, but also offered community to those who needed it most. Heyman decided to bring the model to Rwanda.



Founded in 2006, ASYV welcomed its first 125 students in December of 2008. Four of the students were selected from each of Rwanda's 30 districts. ASYV administers no admissions tests, instead choosing students based solely on need. Residents of the village live in houses comprised of 16 youth, a house mother, and a house counselor. Education is a central part of the village experience, and every child attends a secondary school staffed by Rwandan teachers who have received supplemental training in Israel.

By following a model developed after the Holocaust, ASYV connects the survivors of two genocides in an effort aimed at building the type of community that produces leaders interested in making the world a fairer, more peaceful place. ASYV aims not only to help the youth realize their potential but also to instill in them a spirit of community service. ASYV is guided by the Hebrew principles of *tikkun halev* and *tikkun olam*, which mean repairing the heart and repairing the world. In order to prepare them for the future, ASYV not only addresses the needs of the orphans, but helps them become agents of change for the benefit of others.

More information at www.agahozo-shalom.org.



Photos courtesy of the Agahozo Shalom Youth Village

Increase teacher training

The World Bank identifies three areas of need in secondary education: class size, teacher allocation, and teacher qualifications.¹²³ All of these depend on the recruiting and training of more teachers (as well as assigning them to the schools that need them most). Rwanda already has one post-secondary institution, the Kigali Institute of Education (KIE), dedicated specifically to training teachers. Investments that expand KIE or provide additional methods of training teachers would help expand the number of teachers available and enhance their qualifications.

In 2001, KIE and the Ministry of Education launched a distance-learning program that helped train teachers at sites around the country. Although the program faced challenges due to the high workload of being trained while teaching, such a model allows for current teachers to improve their level of formal training.¹²⁴ A similar model could be extended to offer training to high school graduates who have not attended university. By training them to be teachers before putting them in the classroom, and by making the training available in small centers around the country, many more students would have the benefits of a qualified teacher.

Procure and distribute school supplies

Schools in Rwanda at every level are under-supplied, and textbooks, school supplies, and all forms of technology are lacking. The collection and distribution of old textbooks from developed countries to schools in Rwanda would fill an important gap. Rwanda should also consider partnering with One Laptop per Child, which provides inexpensive laptops designed specifically for students in developing countries. There is no better way of developing a generation of computer-literate, technologically skilled workers than by giving computers to children and training them on their use.

Support supplemental career development

One shortcoming mentioned in the interviews that even successful students face is a lack of experience in professional settings. Because of Rwanda's underdeveloped economy, most university students lack exposure to working professionals such as doctors, lawyers, engineers, and businesspeople. The result is that many top students are unprepared when they pick a career for the reality of working life.

One proposed solution to help give students hands-on experience in professional fields is supporting internships for university students in Rwanda, neighboring countries, or developed nations. The government can help facilitate these experiences by offering summer positions in various agencies to university students. Universities should assemble a network of alumni who are willing to provide internships to current students. Private organizations could provide funding for

travel and living expenses for university students to spend a few months working for a business in Kenya, shadowing a lawyer in London, or helping with an engineering project in the United States.

Another compelling idea for a new intervention was brought up during our interview with the director of Orphans of Rwanda. He explained that one of ORI's goals is to encourage in its participants the entrepreneurial skills that lead to successful businesses and NGOs. Because Rwanda needs leaders at all levels, finding a way to teach university students how to come up with new business ideas and put them into action could have widespread effects on the country's economy.

To this end, creating an entrepreneurship competition for university students would have a significant impact. Students, alone or in teams, could put together proposals for a business idea. Submitted proposals could be judged by a panel of Rwandan business leaders and representatives from the sponsoring organization, and winning proposals would be awarded start-up loans. Such a competition could be organized in partnership with ORI, or it could be open to a broader group of university students.

Sponsor professors

One of the limits to Rwanda's expansion of its higher education sector is a lack of human capital. Universities more than almost any other organization depend on a large group of well-educated faculty. Because of Rwanda's underdeveloped higher education system, the pool from which to draw professors is small, and the genocide's targeting of intellectuals further reduced the talent supply. Rwanda compensates for these shortages by recruiting professors from abroad, which is expensive.

There is a great need to work with universities or institutes in Rwanda to identify underserved areas and recruit professors to teach those subjects. An innovative way to support the partnerships with foreign universities that Rwandan institutions seek would be by endowing a chair for a professor at an American university who spends half the year in Rwanda. Such a position could help facilitate the sharing of best practices, as well as encourage collaborative research and student exchanges.

Higher education partnerships

Twenty universities in Africa have received USAID grants of \$50,000 to partner with universities in the United States. Two of these grants have gone to universities in Rwanda. Funding similar grants would allow American universities to share their expertise with higher education institutions in Rwanda. Not only do the Rwandan institutions need academic support, but they also need help with the logistical issues of running a school: how to structure departments, how to run

a registrar, or finding the best ways to recruit faculty, for instance. Much of the institutional knowledge at American universities could easily be shared with Rwandan schools.

Conclusion

Although education alone cannot solve Rwanda's problems, it is a key element of the short- and long-term development of the country. Having made impressive progress over the past fifteen years in primary and secondary enrollment, and in the building of a higher education system, Rwanda has much work left to do. Rwanda's government has demonstrated its commitment to improving its education system, but it cannot do it alone. More and more outside organizations are investing in Rwanda, recognizing that it offers enormous opportunities to meet real needs. As Dr. Will Recant of the Jewish Joint Distribution Fund said in an interview: "Rwanda is the greatest place to take a chance to make a change in Africa."

Some of the interventions that would make a difference in Rwanda require a large level of investment, such as starting a school, while others are less intensive, like helping individual students purchase school uniforms. With a strong commitment to private enterprise, no tolerance for corruption, and a population energetic for development, Rwanda offers an ideal setting for an education-fueled boom. By helping train the future leaders of the country, support for education creates its own legacy, providing the people of Rwanda with the tools they need to solve their own problems and emerge from genocide to prosperity.

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The views reflected in this document are those of the authors and do not necessarily reflect the views of the Lynde and Harry Bradley Foundation.

Appendix A: Interview Schedule

Dancille Uwihoreye
Rwandan Nurse
March 21, 2009

Claudel Nisingizwe
Rwandan Engineer
March 21, 2009

Jules Shell
Co-Founder and Executive Director, Foundation Rwanda
March 23, 2009

Faith Mbabazi
Rwandan Student
March 25, 2009

David Russell
Director, Survivors Fund
April 2, 2009

Michael Brochner
Executive Director, Orphans of Rwanda
April 7, 2009

Doreen Kagarama
First Secretary, Embassy of Rwanda
April 28, 2009

Carol Rugege
Education Officer, Embassy of Rwanda
April 28, 2009

Dr. Will Recant
Assistant Executive Vice President, American Jewish Joint Distribution Committee
May 1, 2009

Appendix B: Students Enrolled in Higher Education Institutions

Institution	Students		
	2006	2007	2008
Public Higher Learning Institutions	16,451	18,972	20,083
National University of Rwanda	8,082	6,939	6,430
Kigali Institute of Science and Technology	2,096	2,451	2,387
Kigali Health Institute	1,054	1,221	1,108
Institut Supérieur d'Agriculture et d'Elevage	1,057	1,885	1,988
School of Finance and Banking	1716	1796	2224
Kigali Institute of Education	2188	4155	4472
Umutara Polytechnic	258	525	1,474
Private Higher Learning Institutions	20,698	22,041	24,293
Université Libre de Kigali	11,186	8,610	8,686
Université Laïque Adventiste de Kigali	4,045	5,032	5,220
Université Adventiste d'Afrique Centrale	1,095	1,749	2,200
Université d'Agriculture, de Technologie et d'Education de Kibungo	1,738	2,706	3,448
Institut d'Enseignement Supérieur de Ruhengeri	528	759	1,417
Université Catholique de Kabgayi	1,058	1,733	1,462
Kigali Institute of Management	344	511	776
Institut Polytechnique de Byumba	230	354	334
Grand Séminaire de Nyakibanda	168	178	186
Faculté de Théologie Protestante de Butare	73	77	79
Institut des Sciences Pédagogiques de Gitwe	233	332	485
Colleges			752
Kicukiro College of Technology			166
Tumba College of Technology			300
Kavumu College of Technology			154
Rukara College of Technology			132
Total	37,149	41,013	45,128

Source: Ministry of Education, Government of Rwanda (2009).

Appendix C: Higher Education Institutions 1994-2008

Institution				
	1994	1999	2006	2008
Public Higher Learning Institutions				
Ecole Supérieure Militaire	X			
Centre de Formation des Adjoints Techniques de la Statistique	X			
National University of Rwanda	X	X	X	X
Kigali Institute of Science and Technology		X	X	X
Kigali Health Institute		X	X	X
Institut Supérieur d'Agriculture et d'Elevage		X	X	X
School of Finance and Banking	X	X	X	X
Kigali Institute of Education		X	X	X
Umutara Polytechnic			X	X
Private Higher learning institutions				
Institut Africain et Mauricien de Statistique et D'économie Appliquée	X			
Ecole Supérieure de Gestion et d'Informatique Saint-Fidele	X			
Grands Séminaires de Kabgayi	X			
Institut Supérieur Catholique de Pédagogie Appliquée de Nkumbua	X			
Centre D'Enseignement Supérieur de Kigali	X			
Université Libre de Kigali		X	X	X
Université Laïque Adventiste de Kigali		X	X	X
Université Adventiste d'Afrique Centrale	X	X	X	X
Université d'Agriculture, de Technology et d'Education de Kibungo			X	X
Institut d'Enseignement Supérieur de Ruhengeri			X	X
Université Catholique de Kabgayi			X	X
Kigali Institute of Management			X	X
Institut Polytechnique de Byumba			X	X
Grand Seminaire de Nyakibanda	X	X	X	X
Faculté de Théologie Protestante de Butare		X	X	X
Institut des Sciences Pédagogiques de Gitwe	X	X	X	X
Colleges				
Kicukiro College of Technology				X
Tumba College of Technology				X
Kavumu College of Technology				X
Rukara College of Technology				X

Source: Obura (2003), Ministry of Education, Government of Rwanda (2009).

Appendix D: Primary Education Statistics

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Students											
Number of Students	1,270,733	1,288,617	1,431,692	1,476,272	1,534,510	1,636,563	1,752,588	1,857,841	2,019,991	2,150,430	2,190,270
Number of Boys	635,765	644,430	721,881	738,439	763,277	810,585	862,156	912,207	984,272	1,058,026	1,076,159
% of Boys	50.0%	50.0%	50.4%	50.0%	49.7%	49.5%	49.2%	49.1%	48.7%	49.2%	49.1%
Number of Girls	634,968	644,187	709,811	737,833	771,233	825,978	890,432	945,634	1,035,719	1,092,404	1,114,111
% of Girls	50.0%	50.0%	49.6%	50.0%	50.3%	50.5%	50.8%	50.9%	51.3%	50.8%	50.9%
Students of school age	970,161	1,025,190	1,062,435	1,081,358	1,101,861	1,162,955	1,246,634	1,265,205	1,320,134	1,356,461	1,613,055
Boys of school age						566,037	604,022	615,521	637,793	662,558	788,796
Girls of school age						596,918	642,612	649,684	682,341	693,921	824,259
Children of school age		1,466,086	1,472,244	1,475,940	1,479,940	1,274,836	1,339,845	1,353,482	1,389,790	1,415,930	1,712,432
Boys of school age						628,514	659,908	667,428	686,273	699,369	845,580
Girls of school age						646,322	679,937	686,054	703,517	716,561	866,852
Gross Enrolment Rate (GER)		87.9%	97.2%	99.9%	103.7%	128.4%	130.8%	137.3%	145.3%	151.9%	127.9%
Boys Gross Enrollment Rate		89.5%	99.6%	101.9%	105.8%	129.0%	130.6%	136.7%	143.4%	151.3%	127.3%
Girls Gross Enrollment Rate		86.4%	99.5%	98.2%	102.3%	127.8%	131.0%	137.8%	147.2%	152.5%	128.5%
Net Enrolment Rate (NER)		69.9%	72.2%	73.3%	74.5%	91.2%	93.0%	93.5%	95.0%	95.8%	94.2%
NER Boys		70.20%	72.50%	72.9%	74.0%	90.1%	91.5%	92.2%	92.9%	94.7%	93.3%
NER Girls		69.70%	71.80%	74.9%	74.9%	92.4%	94.5%	94.7%	97.0%	96.8%	95.1%
Completion Rate Overall			21.8%	24.2%	29.6%	38.1%	44.9%	46.7%	51.7%	52.0%	52.5%
Transition Rate Overall	21.0%	38.0%	42.0%	37.0%	43.0%	45.0%	60.8%	58.3%	58.7%	54.6%	
Transition Rate Boys								61.8%	62.0%	56.6%	
Transition Rate Girls								54.8%	55.3%	52.7%	
Promotion rate Overall	56.2%	50.5%	49.6%	54.0%	66.2%	64.2%	67.2%	69.6%	67.6%	68.4%	
Promotion rate boys										67.6%	
Promotion rate girls										69.2%	
Repetition Rate Overall	32.10%	38.1%	37.6%	31.8%	17.2%	20.6%	18.8%	15.8%	18.1%	17.7%	
Repetition Rate boys										17.7%	
Repetition Rate girls										17.8%	
Drop out Rate Overall	11.70%	11.40%	12.60%	14.2%	16.6%	15.2%	14.0%	14.6%	14.3%	13.9%	
Drop out Rate boys										14.6%	
Drop out Rate girls										13.1%	

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Primary Education Statistics (Continued)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Teachers											
Head and Teachers	22,435	23,436	26,187	28,698	26,024	27,319	28,254	29,033	30,637	31,037	35,672
Number of teachers						25,360	26,192	26,944	28,474	29,059	33,158
Number of Male	10,002	10,546	12,274	14,034	12,975	12,219	12,490	12,330	12,835	13,067	15,211
% of Male	44.6%	45.0%	46.9%	48.9%	49.9%	48.2%	47.7%	45.8%	45.1%	45.0%	45.9%
Number of Female	12,433	12,890	13,917	14,664	13,049	13,141	13,702	14,614	15,639	15,992	17,947
% of Female	55.4%	55.0%	53.1%	51.1%	50.1%	51.8%	52.3%	54.2%	54.9%	55.0%	54.1%
Teachers Qualified	10,463	11,541	13,934	17,995	21,123	23,271	23,112	25,255	27,795	28,508	30,171
% of Qualified Teacher	46.6%	49.2%	53.2%	62.7%	81.2%	85.2%	88.2%	93.7%	97.6%	98.1%	91.0%
Male Qualified		5,583	6,650	8,712	10,481	11,490	10,877	11,534	12,640	12,758	13,607
% of qualified Male		52.9%	54.2%	62.1%	80.8%	94.0%	87.1%	93.5%	98.5%	97.6%	89.5%
Female Qualified		5,958	7,284	9,283	10,642	11,781	12,235	13,721	15,155	15,750	16,564
% Qualified Female		46.2%	52.3%	63.3%	81.6%	89.7%	89.3%	93.9%	96.9%	98.5%	92.3%
Student - Teacher Ratio	57	55	54	51	59	65	67	69	71	74	66
Student - Qualified Teacher Ratio	121	112	102	82	73	70	76	74	73	75	73
Schools and Classrooms											
Schools	1,940	2,021	2,093	2,142	2,172	2,203	2,262	2,295	2,323	2,370	2,432
Classroom		23,395	24,844	27,339	27,735	28,806	29,385	29,748	30,434	30,737	30,989
Pupil classroom ratio					55	57	60	62	66	70	71
Number of streams		30,866	36,534	39,045	33,771	33,259	34,421	36,175	38,619	39,543	

Source: Ministry of Education, Government of Rwanda (2009).

Appendix E: Secondary Education Statistics

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
STUDENTS												
Public and Private School Enrollment			105,292	125,124	141,163	157,210	179,153	203,551	218,517	239,629	266,518	288,036
Children of school age							1,333,751	1,319,364	1,313,190	1,302,043	1,303,025	1,308,403
Students of school							136,298	139,264	118,389	131,063	170,421	181,765
Boys												88,938
Girls												92,827
Students (public + libre subsidié)	82,224	90,840	60,556	68,457	79,699	88,641	95,833	113,800	128,407	140,530	156,375	181,073
pupils (private)			44,736	56,667	61,464	68,569	83,320	89,751	90,110	99,099	110,143	106,963
% of boys			49.2%	49.1%	49.8%	50.5%	52.0%	52.3%	52.8%	52.5%	52.4%	52.2%
% of girls			50.8%	50.9%	50.2%	49.5%	48.0%	47.7%	47.2%	47.5%	47.6%	47.8%
Total boys			51,811	61,458	70,265	79,422	93,089	106,540	115,350	125,857	139,699	150,221
Boys of school age							651,915	645,934	642,990	638,040	639,162	642,601
Boys (public + L.S)	41,588	45,054	31,254	36,648	43,378	49,567	55,220	66,404	73,785	77,984	86,087	98,724
Number of boys (private)			20,557	24,810	26,887	29,765	37,869	40,136	41,565	47,873	53,612	51,497
% of Boys (Pu +L.S) *	50.60%	49.60%	60.3%	59.6%	61.7%	62.4%	59.3%	62.3%	64.0%	62.0%	61.6%	65.7%
% of Boys (private) *			39.7%	40.4%	38.3%	37.5%	40.7%	37.7%	36.0%	38.0%	38.4%	34.3%
Total filles			53,481	63,666	70,898	77,788	86,064	97,011	103,167	113,772	126,819	137,815
Girls of school age							681,836	673,430	670,200	664,003	663,863	665,801
Number of Girls (public + L.S)	40,636	45,786	29,302	31,809	36,321	38,984	40,613	47,633	56,422	62,546	70,288	82,349
Number of Girls (private)			24,179	31,857	34,577	38,808	45,451	49,378	48,545	51,226	56,531	55,466
% of Girls (public + L.S)	49.40%	50.40%	54.8%	50.0%	51.2%	50.1%	47.2%	49.1%	54.7%	55.0%	55.4%	59.8%
% of Girls (private)			45.2%	50.0%	48.8%	49.9%	52.8%	50.9%	47.1%	45.0%	44.6%	40.2%
Gross Enrolment Rate						11.2%	13.4%	15.4%	16.6%	18.4%	20.5%	22.0%
Boys Gross Enrolment Rate							14.3%	16.5%	17.9%	19.7%	21.9%	23.4%
Girls Gross Enrolment Rate							12.6%	14.4%	15.4%	17.1%	19.1%	20.7%
Net Enrollment Rate						6.5%	10.2%	10.6%	9.0%	10.1%	13.1%	13.9%
Boys Net Enrollment Rate												13.8%
Girls Net Enrollment Rate												13.9%
Repetition				11.4%	14.0%	9.6%	9.2%	9.8%	8.7%	7.7%	8.4%	

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Secondary Statistics (Continued)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
TEACHERS												
Total public+private			4,679	5,557	5,453	6,329	7,058	7,750	7,610	7,818	12,103	16,105
Teachers (public)			2,875	3,220	2,974	3,319	3,697	4,104	4,340	4,385	7,032	9,706
Teachers (private)			1,804	2,337	2,479	3,010	3,361	3,646	3,270	3,433	5,071	6,399
Males Pu+LS+Pr			3,443	4,395	4,438	5,136	5,700	6,210	5,986	6,010	9,016	7,691
Number of Males (public)			2,140	2,465	2,335	2,628	2,916	3,187	3,311	3,275	5,168	4,521
Males (private)			1,303	1,930	2,103	2,508	2,784	3,023	2,675	2,735	3,848	3,170
% of Males			73.6%	79.1%	81.4%	81.2%	80.8%	80.1%	78.7%	76.9%	74.5%	47.8%
Females Pu+LS+Pr			1,089	1,162	1,015	1,188	1,358	1,540	1,624	1,808	3,087	2,496
Females (public)			735	755	639	686	781	917	1,029	1,110	1,864	1,490
Females (private)			354	407	376	502	577	623	595	698	1,223	1,006
% of Females			23.3%	20.9%	18.6%	18.8%	19.2%	19.9%	21.3%	23.1%	25.5%	15.5%
Number of Qualified Teachers			1,544	2,387	2,711	3,286	3,674	3,949	3,940	4,082	6,458	5,849
% of Qualified Teachers			33.0%	43.0%	49.7%	51.9%	52.1%	51.0%	51.8%	52.2%	53.4%	36.3%
Male Qualified			1,386	2,158	2,452	2,990	3,326	3,548	3,417	3,310	5,331	4,593
% of Qualified Males			89.8%	90.4%	90.4%	91.0%	90.5%	89.8%	86.7%	81.1%	82.5%	78.5%
Number of Qualified Female			158	229	259	296	348	401	523	772	1,127	1,256
% of Qualified Females			10.2%	9.6%	9.6%	9.0%	9.5%	10.2%	13.3%	18.9%	17.5%	21.5%
Student - Teacher Ratio (public)			21	21	27	27	26	28	30	32	22	19
Student - Teacher Ratio (private)			25	24	25	23	25	25	28	29	22	17
Student - Qualified Teacher Ratio			68	52	52	48	49	52	56	59	41	49
Schools/ Classrooms												
Total public+private	252	262	322	363	376	393	405	504	553	579	643	689
Public schools	124	262	167	176	186	185	190	286	337	356	405	466
Private Schools	128		155	187	190	208	215	218	216	223	238	223
Number of streams					1,864	3,737	4,306	5,277		5,674	6,170	

Source: Ministry of Education, Government of Rwanda (2009).

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⁹⁸ The International Bank for Reconstruction and Development (2004), 67.

⁹⁹ Ministry of Education, Science, Technology, and Scientific Research, Government of Rwanda (2003).

¹⁰⁰ Haymen, Rachel (2007). “Are the MDGs Enough? Donor Perspectives and Recipient Visions of Education and Poverty Reduction in Rwanda.” *International Journal of Educational Development*, v27, n4, 371-382.

¹⁰¹ Kapur and Crowley, 3. See also Bloom, David, David Canning, and Kevin Chan (2006). *Higher Education and Development in Africa*. Human Development Sector, p. 2.

¹⁰² Bloom, Canning, and Chan (2006), 4.

¹⁰³ Bloom, Canning, and Chan (2006), 2.

¹⁰⁴ Kapur and Crowley, 12.

¹⁰⁵ The International Bank for Reconstruction and Development (2004), 51.

¹⁰⁶ Bloom, Canning, and Chan (2006), 7.

¹⁰⁷ Obura (2003), 106.

¹⁰⁸ Obura (2003), 111.

¹⁰⁹ See <http://www.un.org/millenniumgoals/education.shtml>.

¹¹⁰ “NEPAD to launch e-scholls project in Rwanda” (2006, October 4). Available online: http://www.newsfromafrica.org/newsfromafrica/articles/art_10796.html

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¹¹⁷ United Nations Development Programme Rwanda (2007), 22.

¹¹⁸ Calculations are based on an estimated \$150 fee per student per year, from Foundation Rwanda, and enrollment data from Ministry of Education, Government of Rwanda (2009).

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¹²⁰ The International Bank for Reconstruction and Development (2004), 96.

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¹²³ The International Bank for Reconstruction and Development (2004), 132.

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